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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,782	08/15/2003	Kenneth ASK	07589.0126.PCUS00	1781
28694	7590	07/21/2004	EXAMINER	
TRACY W. DRUCE, ESQ. 1496 EVANS FARM DR MCLEAN, VA 22101			JOYCE, WILLIAM C	
			ART UNIT	PAPER NUMBER
			3682	

DATE MAILED: 07/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/604,782	ASK ET AL. 	
	Examiner	Art Unit	
	William C. Joyce	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☒ Claim(s) 6-8 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 9-12 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/18/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the First Office Action in response to the above identified patent application filed on August 15, 2003.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because legal phraseology, such as means (line 3), must be deleted. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 6, 7, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Mathes (US Patent 4,408,526).

Mathes discloses an apparatus for reducing backlash in a gear wheel, said apparatus comprising at least two interconnected gear rims (21,22) relatively rotatable, one to the other, about a common axis of rotation, a biasing mechanism (53) interconnected between two of said gear rims, the biasing mechanism being operable to reduce backlash in the gear wheel; and the biasing mechanism having a longitudinal axis oriented transversely to the gear rims.

5. Claims 6-8, 13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lloyd et al. (US Patent 4,072,064).

Lloyd et al. discloses an apparatus for reducing backlash in a gear wheel, said apparatus comprising at least two interconnected gear rims (9,10) relatively rotatable, one to the other, about a common axis of rotation, a hydraulic biasing mechanism interconnected between two of said gear rims, the biasing mechanism being operable to reduce backlash in the gear wheel; and the biasing mechanism having a longitudinal axis oriented transversely to the gear rims. Note, the gear rim is considered the outer portion of each gear wheel, wherein the longitudinal axis of the biasing mechanism is oriented transversely to the gear rims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathes (US Patent 4,408,526) as applied to claim 6 above, and further in view of Pundt (DE 39 01 076).

Mathes does not disclose a hydraulic biasing mechanism, but teaches a spring biasing mechanism for relatively rotating the gear rims. The prior art to Pundt teaches a hydraulic piston arrangement for biasing a pair of relatively rotatable gear rims. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the spring biasing mechanism of Mathes with a hydraulic biasing mechanism, as taught by Pundt, motivation being to provide an increase biasing force.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lloyd et al. (US Patent 4,072,064) in view of Smythe (US Patent 2,081,644).

Lloyd et al. does not disclose the hydraulic biasing mechanism being connected to an IC engine oil pump, but Smythe teaches the claimed limitation. It would have been obvious to one of ordinary skill in the art to supply pressurized oil to the hydraulic mechanism of Lloyd et al. from an IC engine oil pump, as taught by Smythe, motivation being to minimize the cost of the device when used in combination with an engine.

9. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lloyd et al. (US Patent 4,072,064).

Lloyd et al. does not appear to disclose a plurality of biasing mechanisms. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of biasing mechanisms on the gear wheels of Lloyd et al., since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of hydraulic biasing mechanisms on the gear wheels of Lloyd et al., motivation being to provide an increase biasing force used to provide relative rotation of the gear wheels.

Allowable Subject Matter

10. Claims 1-5 are allowed.
11. Claims 9-12 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

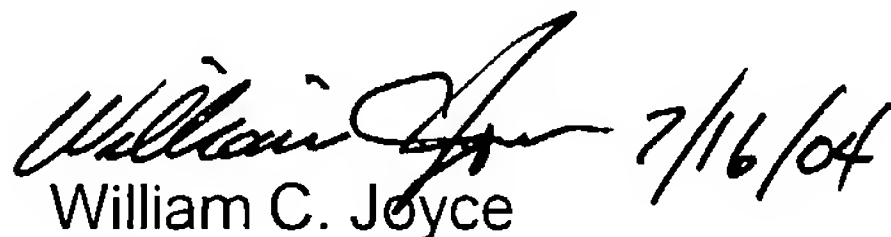
Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the backlash device of Houghton ('428), Wiseman ('466), and Hannel ('321).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (703) 305-5114. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William C. Joyce 7/16/04